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# BOOK REVIEWS

## Improving Patient Care: The Implementation of Change in Clinical Practice

Edited by R Grol, M Wensing, M Eccles. Oxford: Elsevier, 2005, pp 290.

Imagine you received a large grant to create a new guideline on diabetes, and the grant included money to facilitate the use of the guideline in your city. After 3 years, you find that < 20% of doctors who participated in the study actually used the new guideline. What happened? Chances are, you have run into a problem of implementing change in clinical practice. Grol, Wensing and Eccles have written a book to help readers reflect on clinical practice, evidence and behaviour change. Research evidence begs for many behaviour changes in clinical practice to improve patient care, but habits are hard to break even when the evidence is within easy reach. The first few chapters of this book provide an intriguing summary of the literature on behaviour change from many disciplines. Their overviews of these theories are excellent, and the colour sidebars with historical examples of problems with implementation and summaries of theories make for easy reading. A full outline of several existing models is provided, borrowing elements from each for the creation of the new model introduced in this book. In their model, we start with a guideline or the identification of a good experience or practice. The initiation of an implementation process can come from either research findings (top-down) or experiences in the practice (bottom-up). Then we develop a targeted proposal, analyse the performance of the target group, and develop strategies to measure change, test the execution of the implementation plan and evaluate the plan.

What readers will really like about this model is the fact that the authors know what they are talking about. How do I know this? Because of the 13 boxes in their flow chart, 5 boxes deal with contingencies when the planned behaviour change does not take place, or the process for change has not been implemented as designed. There is overwhelming evidence in several chapters of even the most lavishly funded projects on clinical change ending with massive implementation problems and no improvements in patient care. The framework provides a roadmap that moves beyond defining success as the development of an evidence-based guideline; success is instead defined as a guideline that is used as planned. I was reminded of the classic text *Utilization focused evaluation* by MQ Patton (1997), which convinced many programme evaluators that an evaluation is nothing if it is not used. The diagnostic stage in the model emphasises an assessment of current practices and a delineation of realistic reasons as to why a doctor may or may not want to change their clinical routine. This stage is similar to the development of the "logic model" in the literature on programme evaluation, although this book customises the approach for health services research. The emphasis throughout the model is to plan, evaluate and plan some more.

Should change be required or facilitated? Should strategies focus on the organisation or people, appeal to intrinsic or extrinsic motivations and should the intervention be simple or multifaceted? The answers often seem to be "it depends", but the reader will have an evidence-based understanding of the right questions to ask. From pages 261 to 268, the authors end with a framework for describing key features of an implementation of a change intervention—this in itself is worth the price of the book, both for the novice and the experienced academic.

I really have only one concern about this book. There was no evidence that this model was tested in real-world settings, or that it was compared with other existing models. Is it appropriate to adapt parts of different models to develop a new model, and still suggest that you are gaining from the basic propositions and intentions of the original model? For example, a new psychometric measure of intelligence cannot claim to be better because it has borrowed various good items from several established tests. There would need to be new calculations of factor structures, and new tests of reliability and validity. Do the same rules apply to merging conceptual steps from various existing models? A new chapter entitled "Development of the implementation model" would provide readers with answers.

You will find this book to be an indispensable primer on understanding the implementation of change in clinical practice for the novice student, experienced researchers, clinicians and policy makers. After a careful read, you will find yourself flipping through the pages whenever you are deciding on changing or adapting a clinical service, funding a health programme or designing a guideline.

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## Resilience Engineering: Concepts and Precepts

Edited by E Hollnagel, D Woods, N Leveson. UK: Aldershot, 2006, pp 397. ISBN 0754646416

In the patient safety world there is much talk of importing ideas and techniques from other disciplines; unfortunately it remains largely a "do-it-yourself" field where few active participants have become deeply educated about the nature of hazard, risk, success, and failure in clinical work. This book illustrates the depth of the divide between modern safety science and much of what passes for thinking about safety in health care. Because of that, it should be required reading for anyone interested in reducing the burden of injury in clinical systems.

The authors and editors are longstanding participants in a vibrant multidisciplinary stream of research concerned with understanding human performance, accidents, and recovery in complex systems dating back to Three Mile Island, with roots in European "work ecology" studies. Most are non-clinicians and most of the examples are not drawn from health care, but analogies can easily be drawn and the general principles come through clearly. I found concise explanatory models for events in my own clinical experience in almost every section of the book.

The motivation for "resilience engineering" comes from a general sense of unease about the incompleteness of earlier approaches to safety such as chain-of-events models of accident causation, probabilistic risk analyses, reliability approaches. The authors do not dismiss these efforts as valueless but find them insufficient as explanatory or prescriptive guides for complex systems. The search for a new direction ultimately led to a symposium held in Söderköping, Sweden in October 2004 sponsored by Sweden's Nuclear Power Inspectorate and its Civil Aviation Administration. The outcome of that conference—characterised as long discussions interrupted by short (both prepared and ad hoc) presentations—is this book.

Resilience here is distinguished from older conceptions of safety by being more dynamic and more situated in the relationships among components than in the components themselves. Thus, in this view, if safety is a system property it is not something a system *has* but rather something a system *does*. It is concerned not so much with the reliability of individual components (a view which characterizes much so-called "systems thinking" in health care) but rather with understanding and facilitating a system's ability to actively ensure that things do not get out of control; to anticipate or detect disturbed functioning accurately and in sufficient time; to repair and recover; or to halt operations and avert further damage before resuming. Importantly, it is firmly grounded at the "sharp end"; it is concerned with "work as performed" by those on the front lines, not "work as imagined" by managers, administrators, guideline developers, technophiles, and the like.

Because the book is written for scientists and engineers knowledgeable about safety in complex systems, it makes some assumptions about readers' knowledge that will challenge many in a health care audience. For example, concepts such as the abstraction hierarchy are occasionally referred to without a great deal of explanation because they are as basic to engineers as the germ theory of infection is to clinicians. However, I do not view this as a weakness for two reasons. Firstly, the basic precepts of resilience engineering are comprehensible to thoughtful readers despite the occasional unfamiliar idea. Secondly, these challenges can serve as stimuli to further learning. It would be a good thing if more safety researchers in health care understood